

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Original) A method for the preparation of a plasma-polymerised layer on at least a part of the surface of a substrate, said method comprising the steps of:

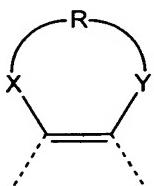
- (a) providing the substrate;
- (b) providing one or more compounds to become plasma-polymerised to form said layer;
- (c) providing a gas plasma; and

(d) allowing said compound(s) to react within said gas plasma so as to form said plasma-polymerised layer on said substrate;

said one or more compounds including at least one polycyclic compound, said polycyclic compound(s) comprising a non-aromatic heterocyclic ring fused to an aromatic or heteroaromatic ring or ring system.

2. Cancelled

3. (Currently Amended) The method according to ~~any one of the preceding claims~~ claim 1, wherein the non-aromatic heterocyclic ring is of the type



wherein X and Y independently are selected from the group consisting of =C<, >C<, -C(=O)-, -C(=N)-, -O-, -S-, -N= and -NR^N- where R^N is selected from hydrogen and C₁₋₄-alkyl, with the proviso that at least one of X and Y is selected from -O-, -S-, -N= and -NR^N-.

4. Cancelled

5. Cancelled

6. Cancelled

7. (Currently Amended) The method according to claim 1 ~~any one of the preceding claims~~, wherein the one or more compounds include at least one compound selected from the group consisting of 3,4-ethylenedioxothiophene, piperonylamine, piperonyloyl chloride, safrole, 3,4-ethylenedioxypyrrole, 3,4-ethylenedioxy-N-methylpyrrole, and 3,4-methylenedioxothiophene.

8. Cancelled

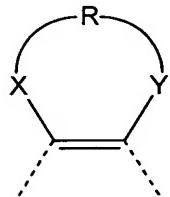
9. (Currently Amended) The method according to ~~any one of the preceding claims~~ claim 1, wherein the energy deposited in the gas plasma is less than 2.0 W/L.

10. (Currently Amended) The method according to ~~any one of the preceding claims~~ claim 1, wherein the plasma-polymerised layer has a thickness of in the range of 5-200 nm.

11. (Original) An object comprising a substrate having a layer of one or more plasma-polymerised compounds on at least a part of the surface thereof, at least one of said compounds comprising a non-aromatic heterocyclic ring fused to an aromatic or heteroaromatic ring or ring system.

12. Cancelled

13. (Currently Amended) The object according to ~~any one of claims 11-12~~ claim 11, wherein the non-aromatic heterocyclic ring is of the type



wherein X and Y independently are selected from the group consisting of =C<, >C<, -C(=O)-, -C(=N-)-, -O-, -S-, -N= and -NR^N- where R^N is selected from hydrogen and C₁₋₄-alkyl, with the proviso that at least one of X and Y is selected from -O-, -S-, -N= and -NR^N-.

14. Cancelled

15. Cancelled

16. Cancelled

17. (Currently Amended) The object according to ~~any one of the claims 11-16~~ claim 11, wherein the one or more compounds include at least one compound selected from the group consisting of 3,4-ethylenedioxothiophene, piperonylamine, piperonyloyl chloride, safrole, 3,4-ethylenedioxypyrrole, 3,4-ethylenedioxo-N-methylpyrrole, and 3,4-methylenedioxothiophene.

18. Cancelled

19. (Currently Amended) The object according to ~~any one of the claims 11-18~~ claim 11, wherein the plasma-polymerised layer has a thickness of in the range of 5-200 nm.

20. (Original) An object comprising a substrate having a layer of a polymeric material on at least a part of the surface thereof, said polymeric material having pendant heteroaromatic rings or ring systems, and said polymeric material being covalently bonded to the substrate.

21. (Original) The object according to claim 20, wherein the layer of the polymeric material has a thickness of in the range of 5-200 nm.

22. (Currently Amended) The object according to ~~any one of claims 20-21~~ claim 20, wherein said polymeric material is a polymer of one or more compounds including at least one polycyclic compound, said polycyclic compound(s) comprising a non-aromatic heterocyclic ring fused to a heteroaromatic ring or ring system, wherein said heteroaromatic ring or ring system gives rise to the pendant heteroaromatic rings or ring systems of said layer of polymer material.

23. (Currently Amended) The object according to ~~any one of claims 20-22~~ claim 20, wherein said polymeric material is a plasma-polymerised material.

24. Cancelled

25. Cancelled

26. Cancelled

27. Cancelled

28. (Original) A method for the preparation of a layer of an electrically conducting material on at least a part of the surface of a substrate, said method comprising the steps of:

(a) providing a substrate wherein at least a part of the surface is coated with a layer of a polymeric material including pendant heteroaromatic rings or ring systems and where said polymeric material is covalently bonded to the substrate;

(b) reacting said pendant heteroaromatic rings or ring systems with one or more second heteroaromatic compounds so as to form a layer of an electrically conducting material including the pendant heteroaromatic rings or ring systems and the second heteroaromatic compounds.

29. Cancelled

30. Cancelled

31. Cancelled

32. (Currently Amended) The method according to ~~any one of claims 28-31~~ claim 28, wherein the layer of the polymeric material is a plasma-polymerised layer.

33. (Currently Amended) The method according to ~~any one of claims 28-32~~ claim 28, the wherein the substrate provided in step (a) is as defined in ~~any one of claims 20-27~~ as having a layer of a polymeric material on at least a part of the surface thereof, said polymeric material having pendant heteroaromatic rings or ring systems, and said polymeric material being covalently bonded to the substrate.

34. (Original) An object comprising a substrate, wherein at least a part of the surface of said substrate is coated with a layer of a polymeric material and, integrated therewith, an electrically conducting material, said polymeric material being covalently bonded to the substrate and having pendant heteroaromatic rings or ring systems, and said electrically conducting material being the reacting product of the pendant heteroaromatic rings or ring systems of the polymeric material and one or more second heteroaromatic compounds.

35. Cancelled

36. Cancelled

37. (Currently Amended) The object according to ~~any one of claims 34-36~~ claim 34, wherein said polymeric material is a plasma-polymerised material.

38. Cancelled

39. Cancelled

40. (Currently Amended) A process of lift-off microstructuring of a polymer on a substrate, said process comprising the steps of:

- (a) providing the substrate having a sacrificial layer in a predetermined micro-pattern;
- (b) depositing one or more layers of polymer material on the sacrificial layer/substrate; and
- (c) dissolving/etching the underlying sacrificial layer (lift-off),

wherein the polymeric material is prepared as defined in ~~any one of claims 1-10~~ claim 1.

41. Cancelled

42. Cancelled

43. Cancelled

44. Cancelled

45. Cancelled

46. Cancelled

47. (Currently Amended) The process according to ~~any one of claims 40-46~~ claim 40, wherein the layer of the polymeric material is a plasma-polymerised layer.

48. Cancelled

49. Cancelled